

**TECHNICAL MANUAL
PIPETTE SHAKER
115V/220Vac, 50/60Hz**

**DLA 120-92-C-8506
NSN 6640-01-249-1212
BURTON PART NO. 0621010**

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TABLE OF CONTENTS

INTRODUCTION.....	Page 1
1.0 DESCRIPTION.....	Page 1
2.0 OPERATING INSTRUCTIONS.....	Page 2
4.0 MAINTENANCE INSTRUCTIONS.....	Page 4
5.0 CLEANING.....	Page 5
6.0 STORAGE.....	Page 5

Figure 1	PIPETTE SHAKER MOUNTING	Page 1
Figure 2	OPERATING DIAGRAM	Page 1
Table 1	TECHNICAL SPECIFICATIONS	Page 4
Table 2	PARTS LIST	Page 4
Figure 3	PIPETTE SHAKER ASSEMBLY	Page 2
Figure 4	WIRING DIAGRAM	Page 4
Figure 5	WIRING DIAGRAM (CONT.)	Page 4

LIST OF FIGURES

Figure 1	PIPETTE SHAKER MACHINE	Page 1
Figure 2	OPERATING DIAGRAM	Page 3
Table 1	TROUBLE SHOOTING	Page 4
Table 2	PART LIST	Page 6
Figure 4	PIPETTE SHAKER ASSEMBLY	Page 7
Figure 3	WIRING DIAGRAM	Page 8
Figure 5	WIRING DIAGRAM 220V	Page 8

INTRODUCTION

This publication provides maintenance instructions with parts breakdown for the Pipette Shaker Machine, Part No. 1006974, manufactured by Burton Medical Products. Each unit has an identification label which reflects the model number, operating power requirements, and manufacturer.

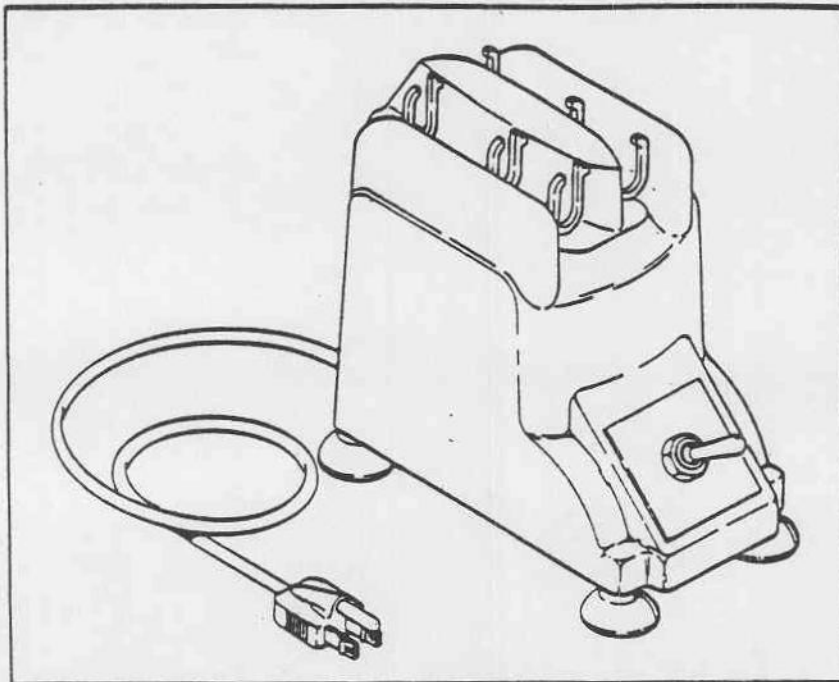


Figure 1. Pipette Shaker, Model 0621010

1.0 DESCRIPTION (See Figure 1)

1.1 General

The pipette shaker assembly is a portable shaker mechanism capable of providing a slightly tossing motion that allows the contents of the pipette tube to be mixed. This mixing occurs without the use of outside stirring implements that might cause contamination or introduce foreign materials into the mixture.

- 1.2 The pipette shaker assembly is designed to provide the best speed and motion for quickly mixing the contents of the pipette(s).

1.3 SPECIFICATIONS:

Input Power.....115Vac,50/60Hz,single phase
Input Power with stepdown Transformer...220Vac,50/60Hz
Switch.....Manual-On/Off Amps
Finish.....Brown
Length.....6 inches
Width.....3 inches
Depth..... 6.75 inches
Weight.....2.0lbs

2.0 OPERATING INSTRUCTIONS (See Figure 2)

- 2.1 Install the pipette(s) into the shaker fingers by slightly pushing the pipette(s) until it (they) snap into position. If desired, one pipette can be installed (the machine will not be unbalanced if only one is shaken at a time). Try to install each pipette near its static balance point in the supports.
- 2.2 Connect the Power cord to proper electrical source. Use the step-down transformer if the mains are 220V single phase, 50/60Hz.
- 2.3 Turn the input power switch on.
- 3.4 Adjust the plastic control knob at the rear of the machine for desired amount of agitation. Turn the knob clockwise to counterclockwise for minimum to maximum vibration. If the desired agitation is unknown, start at mid-range and adjust higher or lower for optimal results.

THEORY OF OPERATION

Basic Circuit Operation: When the switch is closed, ac current will flow through the coil. The magnetic field builds and collapses in sync with the delivered line frequency (50/60Hz), providing magnetic coupling to the ferrous plug attached to the shaker supports. The distance of the plug from the coil can be adjusted to vary the amplitude of the shaking motion (the frequency remains constant).

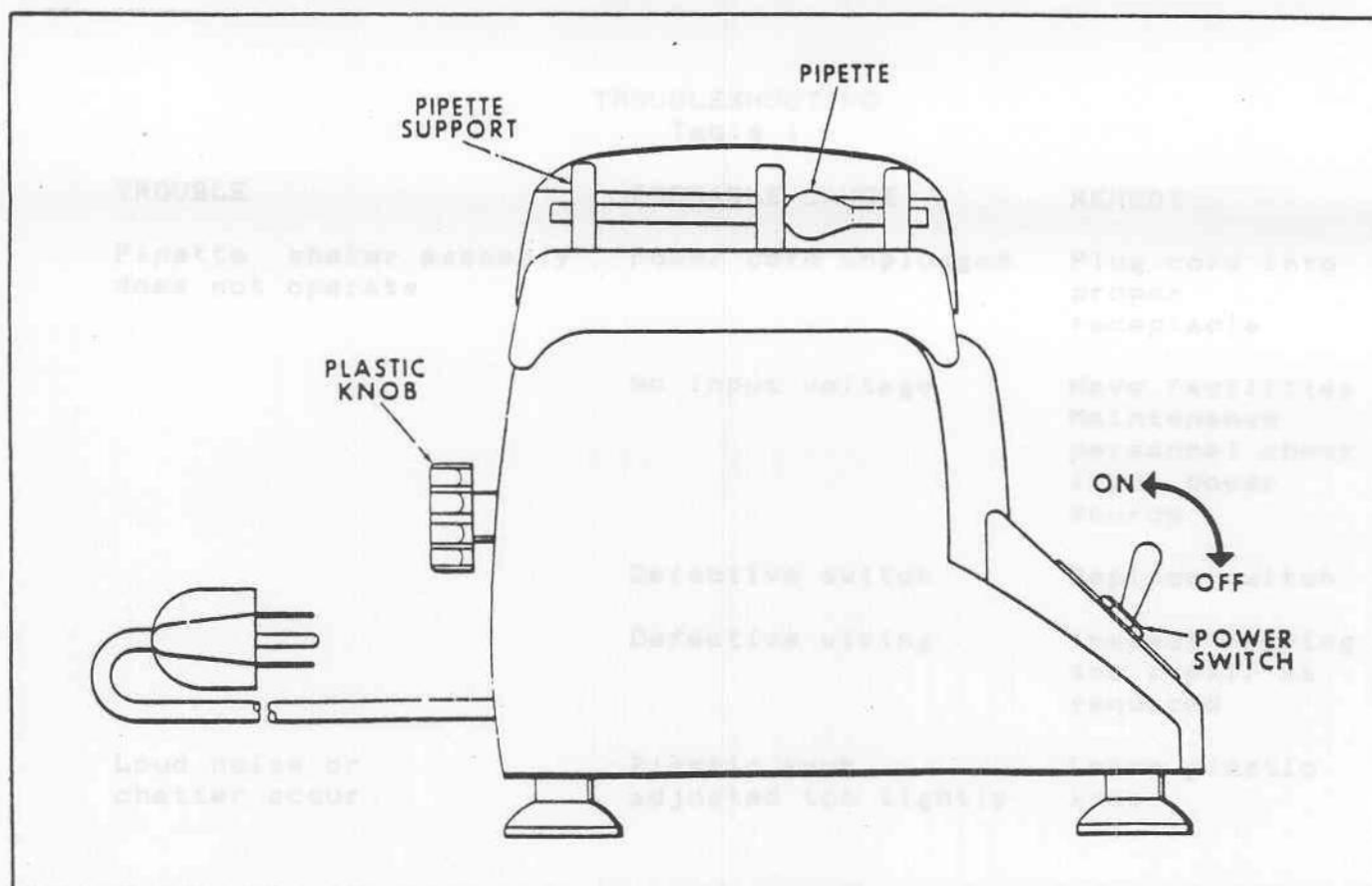


Figure 2. Operating Diagram

4.0 MAINTENANCE INSTRUCTIONS

4.1 Disassembly

NOTE: Always unplug this light when performing maintenance, no matter how minor. The pipette shaker should not be disassembled unless the test procedure or a visual inspection indicates malfunctions. If a malfunction is suspected, the following troubleshooting procedure will determine the extent of disassembly necessary to repair or replace defective parts.

TROUBLESHOOTING
Table 1

TROUBLE	PROBABLE CAUSE	REMEDY
Pipette shaker assembly does not operate	Power cord unplugged	Plug cord into proper receptacle
	No input voltage	Have facilities Maintenance personnel check input power source
	Defective switch	Replace switch
	Defective wiring	Inspect wiring and repair as required
Loud noise or chatter occur	Plastic knob adjusted too tightly	Loose plastic knob

5.0 CLEANING

(Power cord unplugged from wall socket) All parts should be cleaned with a soft, lint-free cloth. Do not use abrasive cleaners or organic solvents. Cloth may be dampened with water, a mild soap or detergent solution, or isopropyl alcohol.

6.0 STORAGE

Store the units indoors only, in normal warehouse facilities. Units should be adequately protected from inclement weather conditions. Storage temperature range is from 0 degree to 100 degree Centigrade. No inspections are required while in storage. Package the units with enough support to prevent physical damage to the housing.

TABLE 2
1006974 PART LIST

ITEM NUMBER	DESCRIPTION	QTY REQ'D PER UNIT
0001102	Terminal, ring	2
0001207	Grommet, Rubber	1
0001214	Foot, vacuum	4
0001797	Terminal lug	1
0002162	Cable 18/3 SVT	1
0002272	Grommet	1
0002342	Wire 18AWG green	.170
0002681	Strain relief-crimp type	1
0003284	Screw-rd hd 6-32X7/8 stlcp	1
0003443	Screw-bd hd 4-40X1/4 stlcp	1
0003521	Screw-bd hd 10-32X5/16 stlcp	4
0005003	Nut, hex 4-40	1
0005101	Washer int tooth #4 stlcp	1
0005104	Washer-internal tooth #10	4
0006005	Switch	1
0006136	Connector, Closed end-sm	1
1001510	HSG-tapped/pipette shak	1
1002167	Washer	1
1002306	Pipette support	3
1002643	Knob	1
1003674	Base-cradle	1

1006975	Cover-base	1
1003692	Nameplate-pipette shaker	1
1003732	Cap-cradle	1
1008147	Nameplate	1
1004347	Coil Assy	1

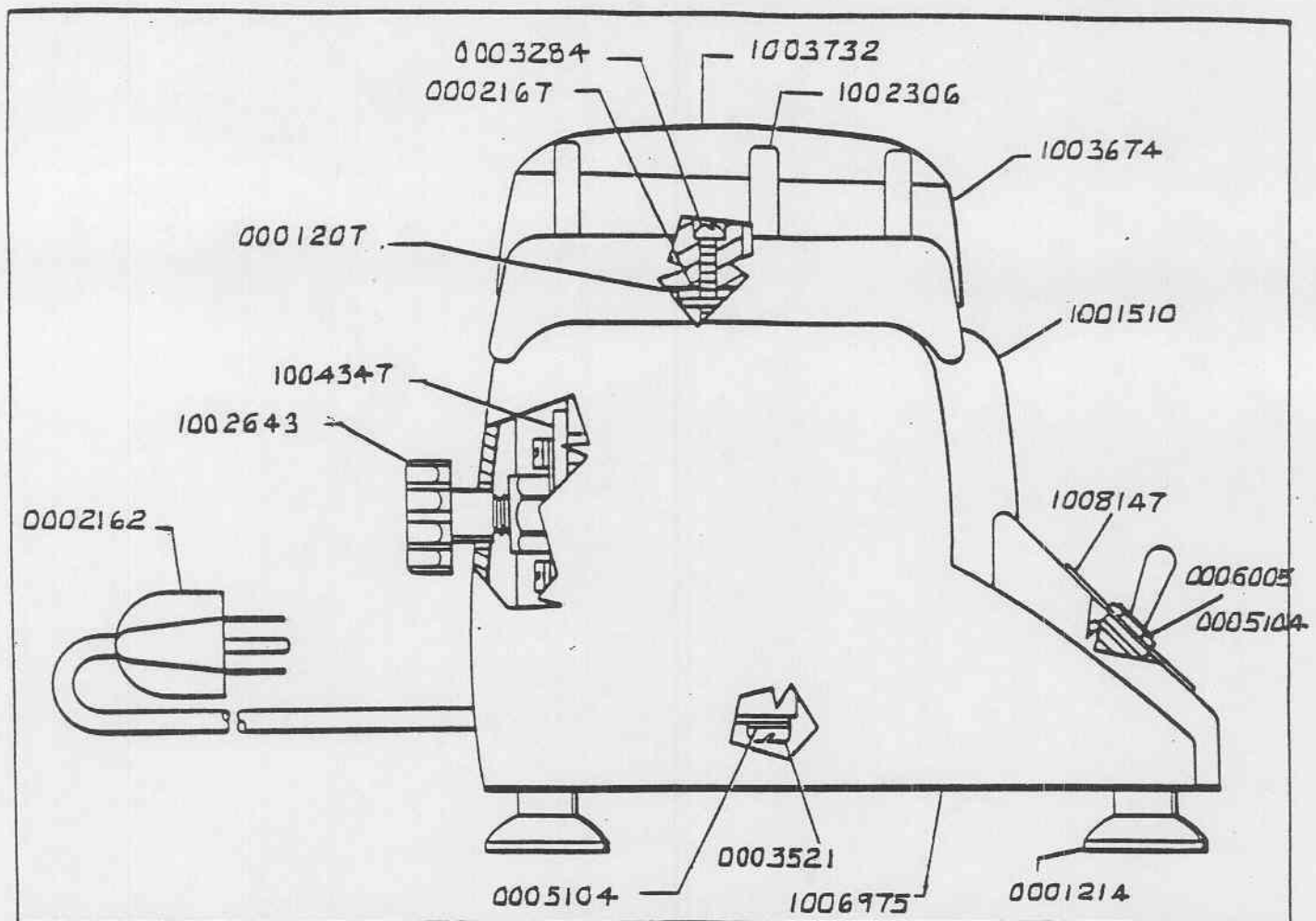


Figure 4. Pipette Shaker Assembly

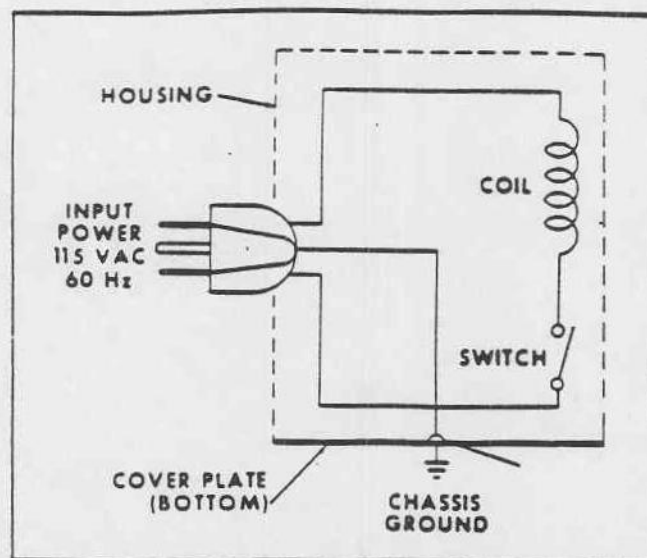


Figure 3. Wiring Diagram

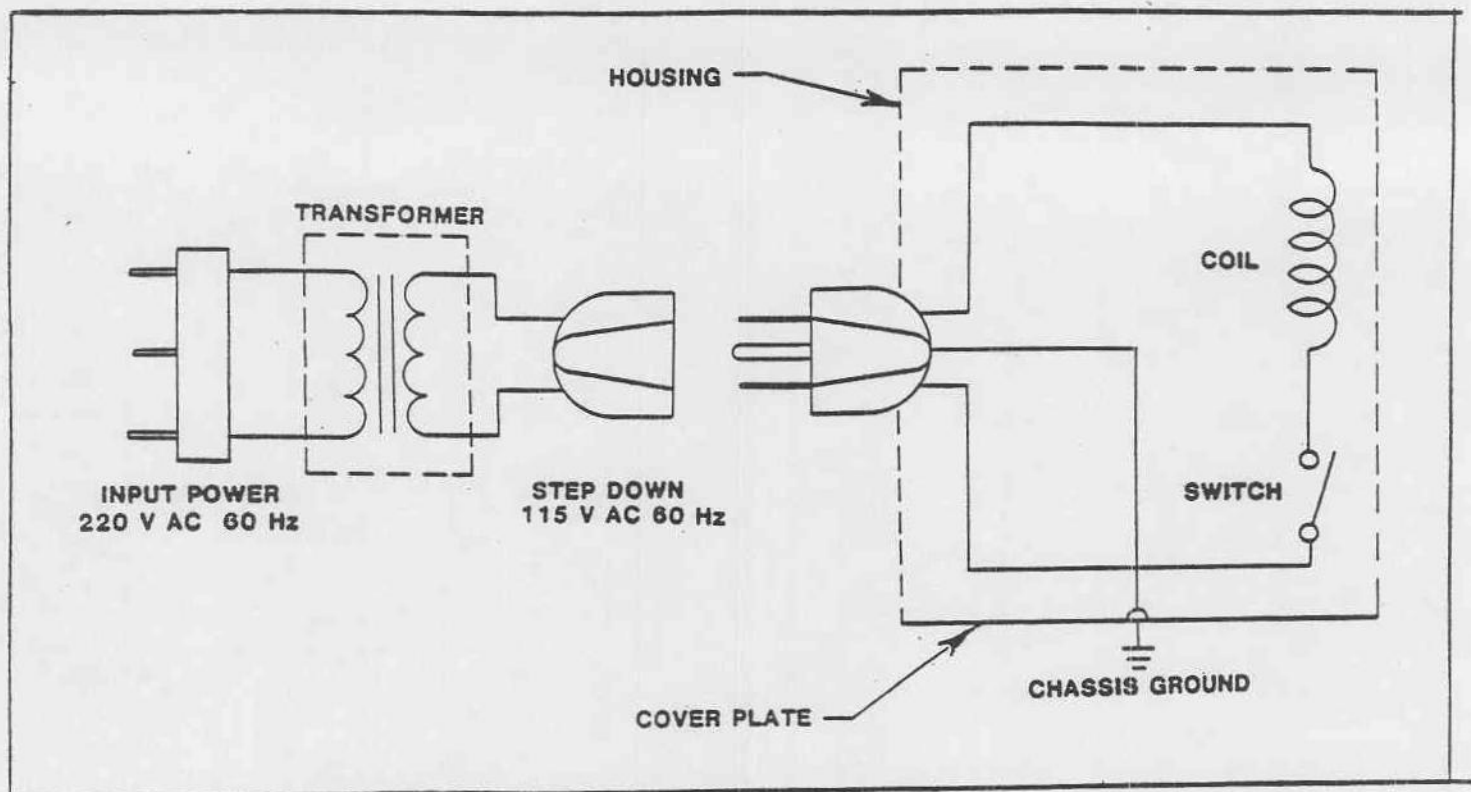


FIGURE 5. WIRING DIAGRAM (220 VOLT OPERATION)

TABLE 1. DATA SHEET CONSUMABLE/DURABLE ITEM LIST

End Item Name: PIPETTE SHAKER

End Item Source: BURTON MEDICAL PRODUCTS

Contract No: DLA120-91-C-8506

End Item NSN: 6640-01-249-1212

Reference No: Model 0621010

CONSUMABLE/DURABLE Item List

THERE ARE NO CONSUMABLE/DURABLE ITEMS REQUIRED FOR THIS PRODUCT

TABLE II. DATA SHEET TOOLS AND TEST EQUIPMENT LIST

End Item Name: PIPETTE SHAKER

End Item Source: BURTON MEDICAL PRODUCTS

Contract No: DLA120-92-C-8506

End Item NSN: 6640-01-249-1212

Reference No: Model 0621010

TOOLS AND TEST EQUIPMENT LIST

THERE ARE NO SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED FOR THIS PRODUCT